

Amendments to the Claims

Kindly amend claims 1, 14, 27 & 28, and add new claims 48 & 49, as set forth below.

All pending claims are reproduced below, with changes in the amended claims shown by underlining (for added matter) and strikethrough/double brackets (for deleted matter).

1. (Currently Amended) A method of managing input/output (I/O) configurations for a group of logical partitions of a logical partition cluster of a computing environment, said method comprising:

determining that said I/O configuration is to be adjusted, wherein said determining comprises using one or more workload goals in making the determination, and wherein the one or more workload goals are associated with workloads of a logical partition cluster, the logical partition cluster comprising a group of logical partitions residing on a common physical processor of said computing environment, the group of logical partitions of the logical partition cluster cooperatively sharing resources of the logical partition cluster and having workloads and resources managed by one or more cooperating workload managers, said determining comprising automatically consulting with the one or more cooperating workload managers of said logical partition cluster of the computing environment in making the determination, wherein said one or more workload goals comprise for a workload executing within the group of logical partitions of the logical partition cluster an expected completion time for the workload and an importance of the workload relative to another workload executing within the group of logical partitions of the logical partition cluster, and wherein the workload and the another workload are executing in one of the same logical partition or different logical partitions of the group of logical partitions of the logical partition cluster:

selecting a channel path from a plurality of channel paths to be used in adjusting I/O configuration of the logical partition cluster of said computing environment, said selecting being based at least in part on an I/O velocity resulting from selecting the channel path; and

dynamically adjusting said I/O configuration using the selected channel path, wherein said dynamically adjusting comprises dynamically connecting the selected channel path to a subsystem of said I/O configuration, said selected channel path and said subsystem being associated with [[a]] the workload executing within the group of logical partitions of the logical partition cluster of said computing environment, and wherein the dynamically adjusting provides additional resources to said workload, wherein said selected channel path was removed from the another workload executing within the group of logical partitions of the logical partition cluster, thereby reducing resources of said another workload.

2-4. (Previously Canceled)

5. (Original) The method of claim 1, wherein said dynamically adjusting comprises removing attachment of the selected channel path from a subsystem of said I/O configuration.

6. (Previously Presented) The method of claim 1, wherein said selecting is further based on at least one of an impact on response time to achieve specific workload goals, contention on a subsystem of said I/O configuration, availability characteristics of said channel path, and complexity of the resulting I/O configuration.

7-10. (Previously Canceled).

11. (Previously Presented) The method of claim 1, wherein said determining comprises using measured subsystem performance being within an average target range in making the determination.

12. (Original) The method of claim 1, further comprising projecting an impact of the adjustment on one or more subsystems to be effected by the adjustment, prior to said dynamically adjusting.

13. (Original) The method of claim 12, further comprising dynamically adjusting when the impact is acceptable.

14. (Currently Amended) A system of managing input/output (I/O) configurations for a group of logical partitions of a logical partition cluster of a computing environment, said system comprising:

means for determining that said I/O configuration is to be adjusted, wherein said means for determining comprises means for using one or more workload goals in making the determination, and wherein the one or more workload goals are associated with workloads of a logical partition cluster, the logical partition cluster comprising a group of logical partitions residing on a common physical processor of said computing environment, the group of logical partitions of the logical partition cluster cooperatively sharing resources of the logical partition cluster and having workloads and resources managed by one or more cooperating workload managers, said means for determining comprising means for automatically consulting with the one or more cooperating workload managers of said logical partition cluster of the computing environment in making the determination, wherein said one or more workload goals comprise for a workload executing within the group of logical partitions of the logical partition cluster an expected completion time for the workload and an importance of the workload relative to another workload executing with the group of logical partitions of the logical partition cluster, and wherein the workload and the another workload are executing in one of the same logical partition or different logical partitions of the group of logical partitions of the logical partition cluster;

means for selecting a channel path from a plurality of channel paths to be used in adjusting I/O configuration of the logical partition cluster of said computing environment, the selecting being based at least in part on an I/O velocity resulting from selecting the channel path; and

means for dynamically adjusting said I/O configuration using the selected channel path, wherein said means for dynamically adjusting comprises means for dynamically connecting the selected channel path to a subsystem of said I/O configuration, said selected channel path and said subsystem being associated with [[a]] the workload executing within the group of logical partitions of the logical partition cluster of said computing environment, and wherein the dynamically adjusting provides additional resources to said workload, wherein said selected channel path was removed from the another workload executing within the group of logical partitions of the logical partition cluster, thereby reducing resources of said another workload.

15-17. (Previously Canceled).

18. (Original) The system of claim 14, wherein said means for dynamically adjusting comprises means for removing attachment of the selected channel path from a subsystem of said I/O configuration.

19. (Previously Presented) The system of claim 14, wherein said selecting is further based on at least one of an impact on response time to achieve specific workload goals, contention on a subsystem of said I/O configuration, availability characteristics of said channel path, and complexity of the resulting I/O configuration.

20-23. (Previously Canceled).

24. (Previously Presented) The system of claim 14, wherein said means for determining comprises means for using measured subsystem performance being within an average target range in making the determination.

25. (Original) The system of claim 14, further comprising means for projecting an impact of the adjustment on one or more subsystems to be effected by the adjustment, prior to the dynamically adjusting.

26. (Original) The system of claim 25, further comprising dynamically adjusting when the impact is acceptable.

27. (Currently Amended) A system of managing input/output (I/O) configurations for a group of logical partitions of a logical partition cluster of a computing environment, said system comprising:

a processor adapted to determine that said I/O configuration is to be adjusted using one or more workload goals, wherein the one or more workload goals are associated with workloads of a logical partition cluster, the logical partition cluster comprising a group of logical partitions residing on a common physical processor of said computing environment, the group of logical partitions of the logical partition cluster cooperatively sharing resources of the logical partition cluster and having workloads and resources managed by one or more cooperating workload managers, said processor being adapted to automatically consult with the one or more cooperating workload managers of said logical partition cluster of the computing environment in making the determination, wherein said one or more workload goals comprise for a workload executing within the group of logical partitions of the logical partition cluster an expected completion time for the workload and an importance of the workload relative to another workload executing within the group of logical partitions of the logical partition cluster, and wherein the workload and the another workload are executing in one of the same logical partition or different logical partitions of the group of logical partitions of the logical partition cluster;

[[a]] wherein the processor is further adapted to select a channel path from a plurality of channel paths to be used in adjusting I/O configuration of the logical partition cluster of said computing environment, the selecting being based at least in part on an I/O velocity resulting from selecting the channel path; and

[[a]] wherein the processor is further adapted to dynamically adjust said I/O configuration using the selected channel path, wherein said dynamically adjusting comprises dynamically connecting the selected channel path to a subsystem of said I/O configuration, said selected channel path and said subsystem being associated with [[a]] the workload executing within the group of logical partitions of the logical partition cluster of said computing environment,

and wherein the dynamically adjusting provides additional resources to said workload, wherein said selected channel path was removed from the another workload executing within the group of logical partitions of the logical partition cluster, thereby reducing resources of said another workload.

28. (Currently Amended) At least one program storage device readable by a machine computer, tangibly embodying at least one program of instructions executable by the machine computer to perform, when executing on the computer, a method of managing input/output (I/O) configurations for a group of logical partitions of a logical partition cluster of a computing environment, said method comprising:

determining that said I/O configuration is to be adjusted, wherein said determining comprises using one or more workload goals in making the determination, and wherein the one or more workload goals are associated with workloads of a logical partition cluster, the logical partition cluster comprising a group of logical partitions residing on a common physical processor of said computing environment, the group of logical partitions of the logical partition cluster cooperatively sharing resources of the logical partition cluster and having workloads and resources managed by one or more cooperating workload managers, said determining comprising automatically consulting with the one or more cooperating workload managers of said logical partition cluster of the computing environment in making the determination, wherein said one or more workload goals comprise for a workload executing within the group of logical partitions of the logical partition cluster an expected completion time for the workload and an importance of the workload relative to another workload executing within the group of logical partitions of the logical partition cluster, and wherein the workload and the another workload are executing in one of the same logical partition or different logical partitions of the group of logical partitions of the logical partition cluster;

selecting a channel path from a plurality of channel paths to be used in adjusting I/O configuration of the logical partition cluster of said computing environment, said selecting being based at least in part on an I/O velocity resulting from selecting the channel path; and

dynamically adjusting said I/O configuration using the selected channel path, wherein said dynamically adjusting comprises dynamically connecting the selected channel path to a subsystem of said I/O configuration, said selected channel path and said subsystem being associated with [[a]] the workload executing within the group of logical partitions of the logical partition cluster of said computing environment, and wherein the dynamically adjusting provides additional resources to said workload, wherein said selected channel path was removed from the another workload executing within the group of logical partitions of the logical partition cluster, thereby reducing resources of said another workload.

29-31. (Previously Canceled).

32. (Original) The at least one program storage device of claim 28, wherein said dynamically adjusting comprises removing attachment of the selected channel path from a subsystem of said I/O configuration.

33. (Previously Presented) The at least one program storage device of claim 28, wherein said selecting is further based on at least one of an impact on response time to achieve specific workload goals, contention on a subsystem of said I/O configuration, availability characteristics of said channel path, and complexity of the resulting I/O configuration.

34-37. (Previously Canceled).

38. (Previously Presented) The at least one program storage device of claim 28, wherein said determining comprises using measured subsystem performance being within an averaged target range in making the determination.

39. (Original) The at least one program storage device of claim 34, wherein said method further comprises projecting an impact of the adjustment on one or more subsystems to be effected by the adjustment, prior to said dynamically adjusting.

40. (Original) The at least one program storage device of claim 39, wherein said method further comprises dynamically adjusting when the impact is acceptable.

41. (Previously Presented) The method of claim 1, wherein said plurality of channel paths include one or more channel paths that can be added and one or more channel paths that can be deleted, and wherein the selecting comprises choosing the channel path from the plurality of channel paths which satisfies a best option, the best option taking into consideration the I/O velocity resulting from selecting the channel path, and wherein the selecting concurrently takes into consideration the one or more channel paths that can be added and the one or more channel paths that can be deleted.

42. (Previously Presented) The method of claim 1, wherein said dynamically adjusting comprises moving the selected channel path from one port to another port.

43-47. (Previously Canceled).

48. (New) The method of claim 1, wherein the selecting is further based, in part, on an entropy index resulting from selecting the channel path, the entropy index being determined by adding together a total number of I/O channels and subsystems that are interconnected in the resulting configuration.

49. (New) The method of claim 1, wherein the selecting is further based on, for the selected channel path:

- an impact to the response time to achieve a specific workload goal;
- whether a destination port is busy;
- a resulting availability characteristic; and
- a resulting entropy of the I/O configuration.
